

REMARKS

Applicants acknowledge receipt of the office action in which the Examiner rejected claims 1-6, 8-11, and 13-18 under 35 USC § 112, second paragraph and rejected claims 1-6, 8-11, and 13-18 under 35 USC § 102 as anticipated by Hollenkamp (WO 2004/082059, which is also US 7,479,353).

For the reasons set out below, Applicants respectfully traverse the rejections.

Withdrawn claims

Several claims are currently withdrawn from consideration. Applicants have not deleted these claims, in the expectation that the withdrawn claims will be restored upon allowance of a generic claim.

Rejection of claims 1-6, 8-11, and 13-18 under 35 USC § 112, second paragraph

As the basis for this rejection, it is asserted that the phrase “electrochemical element” is unclear. In response, Applicants have amended the claims to recite “an electrochemical device.” If the Examiner is of the opinion that further amendment is required in order to comply with § 112, she is respectfully requested to telephone the undersigned.

Rejection of claims 1-6, 8-11, and 13-as anticipated by Hollenkamp

In support of this rejection, the examiner cites various passages in Hollenkamp. While it is true that the cited passages contain the subject matter indicated by the Examiner, Applicants respectfully submit that the reference falls short of anticipating the present claims. Specifically, claim 1 requires that “the active material of the cathode comprises an intercalation material having an upper reversible-potential-limit of at most 4 V versus Li/Li⁺.” This is not taught in Hollenkamp.

With regard to the cathode, the cited reference discloses that “The positive electrode is formed from any typical lithium intercalation material, such as a transition metal oxides and their lithium compounds. As known in the art, transition metal oxide composite material is mixed with binder such as a polymeric binder, and any appropriate conductive additives such as graphite, before being applied to or formed into a current collector of appropriate shape.” (col. 9, ll. 58-65 of the ‘353 patent).

Applicants concede that the use of Li intercalation materials as electrodes is known. Indeed, Applicants made reference to several publications of said concept in the specification of the present case. However, Applicant submit that the present invention relates to a discovery that is distinguishable from the state of the art.

Specifically, and as recited at paragraph [0040] of the present specification, Applicant has discovered that intercalation materials **with an upper reversible-potential-limit of more than 4V versus Li/Li⁺** are not suitable for reversible use.” This discovery is incorporated in the claim element that requires that the cathode have an upper reversible-potential-limit of at most 4 V versus Li/Li⁺. Hollenkamp does not distinguish between intercalation materials and wholly fails to recognize the differences between them that render some of them inoperable at elevated temperatures. Because of the thousands of possible materials, constructing a successful electrochemical device based on the disclosure of Hollenkamp would require undue experimentation. In fact, Hollenkamp’s complete lack of recognition of the shortcomings of certain compounds as cathodes amounts to a teaching away from the present invention, since there is not even a hint that some compounds might not work.

Applicants therefore respectfully submits that the present claims recite an invention that is both new and non-obvious in view of the prior art.

Conclusion

Applicants believe that the present submission wholly responds to the office action. If it would be considered helpful in resolving any issues in the case, the Examiner is encouraged to contact the undersigned at the number below.

Respectfully submitted,

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